Joint Tsunami Research Effort
University of Hawaii - HIG 436
2525 Correa Road, Honolulu, HI 96822

April 10, 1975

Dr. Alekseev
Deputy Director
Computing Center
Novosibirsk 630090
USSR

Dear Dr. Alekseev:

Thank you so much for your most informative letter of March 18, 1975. After reviewing your capabilities, I am certain that we can make our programs compatible with your BESM-6 computer.

I am enclosing another program (punched in CDC code) that I would like to have executed on your computer. Please send me the results as soon as possible.

There is still some question about your computer storage. Specifically, in addition to core storage, do you have a disk or tape system for storing data? I believe we can run our codes on your machine with little modification, however, there is a need for dumping the output as the programs are executing. For this reason, I need either a disk or a tape storage to complete the program.

As of now, my wife and I anticipate arriving in Novosibirsk on July 7, 1975 and depart on August 18, 1975. As soon as I have airplane schedules, I will inform you of my exact arrival time. Within the six week period we should be able to run the tsunami interaction problem for the Kuril Islands. I am looking forward to working with you and your colleagues.

Sincerely,

Original signed by

E. N. Bernard

Enclosure

Computing Center
Novosibirsk 630090
USSR

Dr.E.N.Bernard
U.S.Department of Commerce
National Oceanic and Atmospheric Administration
Environmentel Research Laboratories
Joint Tsunami Effort
University of Hawaii - HIG 436
2525 Correa Rd., Honolulu, HI 96822 USA

March, 18, 1975

Dear Dr.Bernard,

As requested, your program deck has been run on our BESM-6 computer and herewith we send you the output.

Before solving your program deck on BESM-6 its text was punched anew, since the punched-program code is not compatible with any of the codes of the DUBNA monitor system. One can see from the output enclosed that solution of the program takes as long as 11 seconds of the processor time. Some deviation in the results is, probably, due to a different length of the storage locations.

The only change made in the program was the following : PROGRAM TEST became the first statement.

Therefore the following possibilities for running your programs within our Computing Center can be suggested :

1) If it is possible, you will have your program keypunched in the CDC code on your computer system.

2) You will take texts of programs with you or have them sent in advance and they will be punched in the УШИ code on our keypunch machines

Appendix 1 describes preparation of a program for keypunching and presents character coding understood by the DUBNA monitor system.

It should be noted that in the Computing Center of the Siberian Branch of the USSR Academy of Sciences is used the FORTRAN-DUBNA language that is a subset of FORTRAN-CERN.

Considering the DUBNA monitor system characteristics we can give the following answers to your questions :

A. Under standard mode of operation the user has access to 53400_8 = 22,3 48-bit storage locations, under special mode of operation FICMEMOR the direct access memory can be extended up to 77400_8 48-bit storage locations.

B. All link-words and directive words in FORTRAN-DUBNA are written

C. Keypunch machines (УПП, CONSUL) have Russian characters.
D. The printer prints in English and Russian.
E. The answer is given in Appendix 2.
F. There is a possibility of plotting and drawing contours on a printer.

It will be noted that

1) The keypunch machines (УПП, CONSUL) used in the Computing Center of the Siberian Branch of the USSR Academy of Sciences can make only row punching in the УПП code but the monitor system uses both УПП and CDC codes (colomn punching on the ICT device).
2) FORTRAN-DUBNA does not have Gw.d and TW specifications.
3) The FORMAT statement can be carried oyer to the next punch card only after 72 positions have been loaded.
4) The main program must have, as the first statement,

PROGRAM NAMEXX

where NAMEXX is a sequence of 6 (and not more) alphanumeric characters beginning with a letter.
5) The arrays can have up to 3 dimensions.
6) The array indices can be of the following form

C*I ± d
I ± d
C*I
I
C

where C and d are integer constants without a sign, I is a simple variable of the integer type, * is the multiplication sign. The value of indices is 0.
7) In the DATA statement the symbols "("and")" are used instead of the symbol"/" . For example:

DATA ((u(i), i = 1,10) = 1, 2.,3., 7(4.32))

Yours sincerely,

A.S.Alekseev

Encl.

Joint Tsunami Research Effort
University of Hawaii - HIG 436
2525 Correa Road, Honolulu, HI 96822

January 13, 1975

Dr. A. Alekseev
Deputy Director
Computer Center, Siberian
Department
Academy of Sciences
Novosibirsk, 90 Prospect Nauki. 6
Union of Soviet Socialist Republics

Dear Dr. Alekseev:

In anticipation of using your computer facility in July 1975, I am seeking information about your computer capabilities. Could you please send me information on the following:

A. Memory Capabilities: To model the Kuril Islands will require approximately six times the number of depth data points used for the model. Thus, if we model the Kuril Islands with 1000 grid points, then we will need 6000 storage locations to run our existing program. Therefore, please let us know size of your usable in core storage. Additionally, letuus know if you have any means of extending your present core by means of direct access disks or subroutines.

B. Computer Language: Our present program is written in English in FORTRAN. Will this be compatible with your compiler?

C. Keypunch Machine: Do your keypunch machines have English or Russian characters?

D. Printer: Does your printer print in English or Russian?

E. Format Statements: How do you generate a READ or WRITE statement?

F. Output Devices: Do you have a plotter with plotting routines to draw contours or perspective views of three-dimensional data sets.

Please run the enclosed program deck and return the output with your answers. I appreciate your help.

Sincerely,

Original signed by

E. N. Bernard
Research Oceanographer

Enclosure

Joint Tsunami Research Effort
University of Hawaii - HIG 436
2525 Correa Rd, Honolulu, HI 96822 USA

February 7, 1975

Dr. A. Alekseev
Deputy Director
Computer Center, Siberian Department
Academy of Sciences
Novosibirsk, 90 Prospect Nauki. 6
Union of Soviet Socialist Republics

Dear Dr. Alekseev:

Enclosed is a letter from E. N. Bernard and a small sample computer program which we would very much appreciate your running within your Computer Center. If you send us a copy of the output along with any notations which indicate changes you have had to make we would very much appreciate it. We have a duplicate deck and computer run output of this program here. As soon as we find that we are able to run on your computer system, we will be sending other materials which relate to our subroutine requirements for the large-scale tsunami propagation program.

Best regards,

Original signed by

Gaylord R. Miller
Director, JTRE

Enclosures

CABLE SEC DISSEM BY 48 PER TOTAL COPIES 23-2 RUN BY

ADMIN INTERNAL USE ONLY

PERSON/UNIT NOTIFIED

STATE MESSAGE

ADVANCE COPY ISSUED/SLOTTED BY AT Z

ACTION UNIT

INFO RF. FILE VR, SOV3, OPR, OOR3, OER/..., [redacted], OGS/HSG, OSR2, SE 7, DCDZ,

ACTION #

STATSPEC

T 978126 EIA866 PAGE 01 NC 48930

TOR:290507Z APR 75

R 282056Z APR 75
FM SECSTATE WASHDC
TO AMEMBASSY MOSCOW 3312
BT
UNCLAS STATE 098328
E.O. 11652: NA
TAGS: SENV, UR, US
SUBJECT: US-USSR ENVIRONMENTAL AGREEMENT: PROJECT IX-2.1 TSUNAMI

1. SCI COUNS PLEASE PASS FOLLOWING LETTER FROM MR. B. THOMPSON, US PROJECT LEADER IX-2.1, TO SOVIET PROJECT LEADER, DR. V.M. POPOV, CHIEF, ARCTIC-ANTARCTIC DEPARTMENT, HYDROMET, MOROZOVA ST, 12, MOSCOW, WITH COPY TO KUSHINNIKOV OF HYDROMET.

2. QUOTE: DEAR DR. POPOV: WE ARE EAGER TO PROCEED WITH THE SCIENTIST EXCHANGE PROGRAM PROPOSED AT OUR DECEMBER 1974 MEETING IN WASHINGTON AND AGREED UPON DURING THE THIRD MEETING OF THE JOINT COMMITTEE IN MOSCOW, ALSO IN DECEMBER. DR. E. BERNARD OF NOAA'S JOINT TSUNAMI RESEARCH EFFORT (JTRE) IN HAWAII, HAS EXCHANGED INFORMATION ON THE BESM-6 COMPUTER WITH DR. A. ALEKSEEV, NOVOSIBIRSK, AND NOW WISHES TO VISIT NOVOSIBIRSK FROM 7 JULY TO 15 AUGUST, 1975 FOR COMPUTATION OF TSUNAMI RUN-UP AND ISLAND WAVE INTERACTIONS. BY HIS LETTER OF 10 APRIL 1975, DR. BERNARD HAS INFORMED DR. ALEKSEEV OF HIS WISH TO VISIT NOVOSIBIRSK. DR. BERNARD WOULD LIKE TO VISIT MOSCOW: 3-7 JULY, AND WOULD HOPE TO SEE YOU AT THAT TIME TO DISCUSS HIS PROJECT. I WOULD APPRECIATE YOUR MAKING THE NECESSARY ARRANGEMENTS FOR THIS VISIT.

3. DR. BERNARD WOULD LIKE TO TAKE THIS OPPORTUNITY OF BEING IN THE USSR TO SIGHTSEE IN LENINGRAD, AND ARRANGEMENTS FOR THIS WILL BE MADE THROUGH INTOURIST AND PAN AMERICAN WORLD AIRWAYS. HE WILL BE ACCOMPANIED FOR THE ENTIRE VISIT BY HIS WIFE, MRS. SHIRLEY A. BERNARD. HIS TENTATIVE SIGHTSEEING PLANS ARE AS FOLLOWS: 29 JUNE-3 JULY, LENINGRAD.

4. I PROPOSE THAT DR. BERNARD'S OFFICIAL PORTION OF HIS VISIT, 3 JULY-15 AUGUST, SHOULD BE ON A RECEIVING SIDE PAYS BASIS AND ACCORDINGLY, WE REQUEST THE SOVIET SIDE TO ARRANGE FOR HIS TRAVEL FROM MOSCOW TO NOVOSIBIRSK AND RETURN AND FOR HIS ACCOMMODATIONS IN MOSCOW

1. LESS ... 2. IIE file

Environment Agreement

ADMIN INTERNAL USE ONLY

CABLE SEC DISSEM BY _____ PER _____ TOTAL COPIES _____ RUN BY

PERSON/UNIT NOTIFIED _____

ADMIN INTERNAL USE ONLY

STATE MESSAGE

ADVANCE COPY ISSUED/SLOTTED _____ BY _____ AT _____ Z

ACTION UNIT

ACTION #

INFO

RF. FILE. VR.

1		4	
2		5	
3		6	

T 978126 EIA866 PAGE 02-02 NC 48930

TOR: 290507Z APR 75

AND NOVOSIBIRSK. ALL EXPENSES FOR MRS. BERNARD'S VISIT WILL BE THE RESPONSIBILITY OF DR. BERNARD. HE WILL OBTAIN TICKETS FOR HER ENTIRE TRIP AND FOR HIS FLIGHT FROM LENINGRAD TO MOSCOW. WE SHALL INFORM YOU BY CABLE OF THE RESERVATIONS MADE THROUGH INTOURIST AND PANAM AS SOON AS THEY ARE CONFIRMED.

5. PLANS FOR OUR JOINT EXPERIMENT DURING AUGUAT-SEPTEMBER 1975 SHOULD BE FINALIZED IN THE NEAR FUTURE. I SHALL SEND A SEPARATE MESSAGE SHORTLY IN THIS REGARD" UNQUOTE KISSINGER